

embodiment, the vertical downscaling is effectively moved to after performing the inverse DCT, as illustrated in FIG. 2. Likewise, motion compensation is performed on each field separately, as mentioned above. If the motion compensation were frame based, then, in this embodiment, the prediction error could be converted to field based using the technique illustrated. To convert frame motion vectors to field based, the frame motion vector may be employed for each of the top and bottom field motion vectors. A difference between the embodiments illustrated in FIG. 5 and FIG. 6 is whether the macroblock is stored as a frame macroblock or a field macroblock. As previously discussed, if it is stored as a frame macroblock, then interleaving is performed as illustrated in FIG. 5. In contrast, as illustrated in FIG. 6, if the macroblock is stored as a field macroblock, then interleaving is performed, as illustrated, and the data lines may be processed as previously described for an interleaved field format.--

Please rewrite the paragraph that runs from page 28, line 4 to page 28, line 17, as follows:

--Another aspect of an embodiment in accordance with the invention is the display of the decoded video images that are downsampled in the frequency domain, such as an MPEG2 image in the DCT domain, although the invention is not limited in scope in this respect. In this particular embodiment, the video decoder subsystem discussed above is coupled to a video display subsystem, as illustrated in FIG. 10. Both the video decoder subsystem and the video display subsystem may be coupled with the memory subsystem, where decoded video images may reside. As illustrated in FIG. 10, in the memory subsystem, the decoded video images are labeled as video buffer 1, video buffer 2 and so on. The number n of decoded video images may be chosen according to the video decoder and video display subsystems. In such an embodiment, besides typical information, such as the decoded image size (X, Y), the video decoder subsystem may be coupled with the video display subsystem with additional signals, such as the Picture Type (PICT) and the vertical subsampling factor (VSFF), that relate to the transform-domain downsampling operation. Signals such as PICT and VSFF may be used to adjust the video display subsystem to properly display the decoded video images that are downsampled in the transform domain using an embodiment in accordance with the invention.--